THE LICENSING OF RADIO SERVICES IN THE UNITED STATES: A STUDY IN ADMINISTRATIVE FORMULATION OF POLICY

BY

JACOB MURRAY EDELMAN

A. B., Bucknell University, 1941

A. M., The University of Chicago, 1942

AN ABSTRACT OF A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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THE LICENSING OF RADIO SERVICES IN THE UNITED STATES: A STUDY IN ADMINISTRATIVE FORMULATION OF POLICY

The use by the Federal Radio Commission and its successor, the Federal Communications Commission, of the broad discretionary authority delegated to them in the licensing of radio services presents several questions bearing on the problem of the administrative formulation of policy. Among these are what policies have been developed and how consistently they have been applied; in what manner they have been made known to those whose conduct they affect; and to what degree the licensing authority has found it possible or thought it wise to reduce discretion to rule. Both the Radio Act of 1927 and the Communications Act of 1934 directed the regulatory authority to grant licenses and exercise its powers so as to serve the "public interest, convenience or necessity," a standard whose significance is colored by its context and the purpose of the particular radio service to which it is applied.

Source materials on the development of licensing policy are, principally, the annual reports of the Commissions, their published rules and regulations, their decisions and opinions in individual cases, special reports, press releases, and public notices. Those policies capable of hard and fast application on the basis of objective determinations of fact and those that are controlling in virtually all cases have for the most part been incorporated into the formal rules and regulations. Policies that are not so important as to be controlling in all instances, and those that involve subjective judgments regarding relatively minor differences in the merit of competing applicants, have usually been announced in public notices or opinions and applied on a case to case basis, but not incorporated into the rules.

Admistrative Controls Over Innovation in Radio

The Communications Act directs the FCC to "study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest." In licensing experimental stations the Federal Radio Commission placed major stress upon the importance of fundamental research giving promise of substantial contributions to the advancement of the radio art, and the FCC has continued to apply this policy. Applications have often been denied because the research proposed would not advance the science of radio, because it was a blind for commercial operation, because research once undertaken had not been continued, or because the reports on findings required by the licensing authority were too vague or otherwise unsatisfactory. The FCC later established another class of experimental stations designed to experiment in the feasibility of services not yet established on a regular or commercial basis or to find new uses for established services.

The FCC has itself undertaken considerable research, both of a theoretical and of a practical character, and it maintains a staff which keeps abreast of new scientific and technological developments which may have a bearing on regulatory policies.

Because the band of frequencies allotted to a new service determines in large measure the nature of its growth and the kind of equipment it will employ, frequency allocation is a crucial phase of the regulatory commission's functions. Experimental licensing affords data regarding suitable frequencies. Public hearings are held before a service is placed in a particular band, and newly allocated services are usually maintained in an experimental status for a time to permit subsequent frequency changes that may be found necessary. The social and economic importance of a proposed service as well as its technical characteristics are considered before it is determined whether it will be established or

which frequencies will be employed. The amount of "frequency space" available has grown steadily and enormously in the last two decades, making the allocation problem somewhat easier and permitting the licensing of many new services. Unfortunately, the Federal Radio Commission for the most part followed a policy of recognizing "squatters' rights" in the frequency spectrum in the early years of radio, and this has led to serious congestion and some service allocations that are less than ideal in the lower frequency bands, which have been used longest. In recent years there has been more careful planning prior to allocation.

The final step in the development of a new service is a change from experimental to regular or commercial status. This is permitted once the service is technically practicable and has been determined to be important enough to warrant the allocation of frequency space.

The Licensing of Broadcast Sebvices

Broadcast stations are those whose transmissions are intended for receipt indiscriminately by the general public. Because only a relatively small band of frequencies is allocated for each of the broadcast services and because stations in the same area interfere with each other if they transmit on the same or adjacent frequencies, the number of broadcast licensees must be severely limited through the use of the licensing power. Few of the factors that the regulatory commission weighs in considering applications have been held sufficiently controlling to warrant the grant or denial of an application on the basis of the one factor alone. In the vast majority of cases the FCC and its predecessor have had to weigh a complex of factors, some favorable to a grant and some unfavorable, and then come to a decision. The licensing authority has held that with regard to the broadcast services the interest of the *listening* public is superior to that of the broadcaster.

The most pressing problem with respect to standard

broadcast stations facing the Federal Radio Commission when it was created in 1927 was the intolerable chaos of "frequency jumping" and unlicensed broadcasting that had followed upon the breakdown of radio regulation in 1926. By the "Davis Amendment" of March, 1928, Congress complicated the problem by declaring that the five zones into which the Radio Act divided the country and the states within each zone were entitled as nearly as possibly to equality of broadcast service so far as number of stations, frequencies, time of operation, and power were concerned[1]. In the autumn of 1928 the Radio Commission adopted a general plan for distributing broadcast facilities among the communities of the nation which is still followed in its salient provisions[2]. Forty channels, called "clear channels", were designated for the exclusive use at night and the dominant use in the daytime of one powerful station able to reach rural districts; eight channels were assigned to each zone. Thirty-four channels were designated as regional, permitting 125 full time stations to operate on them simultaneously. On the local channels 150 full time stations could operate simultaneously, with 30 in each zone. Stations are protected from interference from other stations to the boundaries of their specified service areas. Although the formal plan has not changed and is normally regarded as a controlling factor in considering applications, both the Radio Commission and the FCC have occasionally waived, ignored, or stretched some of its provisions in particular cases, usually to make possible more profitable operation and thus improve the financial position of the grantee.

Another consideration affecting the distribution of broadcast stations is the factor of public need. The FCC has frequently declared that in the determination of need it could not reduce discretion to rule and that it is not required by the act to make a finding as to need at all.

[1]45 *Stat.* 373 (1928).
[2]Federal Radio Commission, General Order No. 40 (August 30, 1928).

Applicants must nevertheless make a showing regarding the need of the area for additional service, and this has frequently been an important contributing factor. Authorizations have often been based in part on a finding of need for a particular kind of service, such as frost warnings, flood warnings, or rural educational programs[3]. But where the record does not show "unsatisfactory broadcast service or programs unsatisfactory to the listening audience," it has usually been held that no need for additional service exists[4]. Applications have been denied for lack of public need despite a showing that the community in question was not receiving the programs of all networks or that the station would aid in law enforcement or in airplane navigation[5]. Although weight has usually been given to testimony from local governmental units that a public need for broadcast service existed, such testimony has not been heeded in all cases[6]. The licensing authority has declared as a general rule that the need of commercial organizations for an additional advertising medium does not establish a public need, but it has made several grants largely on the basis of this consideration[7]. In general it appears that the licensing authority has taken advantage of the impossibility of establishing need objectively by according it much or little weight without great consistency.

[3]In the Matter of John W. Haigis, 7 FCC 43, 44 (1939); In the Matter of Walter H. McGenty, 5 FCC 46, 49 (1935); In the Matter of Lincoln Memorial University, 4 FCC 305, 308 (1937).

[4]In the Matter of State Broadcasting Corporation, 6 FCC 502, 505 (1938).

[5]In the Matter of The Colonial Network, Inc., 5 FCC 654, 661 (1938); In the Matter of Standiford, Coburn and Sidner, 5 FCC 570, 575 (1938); In the Matter of Edwin A. Kraft, *et al.*, 3 FCC 560, 561 (1936). In the last two cases cited the Commission pointed out that other frequencies than those in the broadcast band are available for police use and aeronautical safety service.

[6]In the Matter of Alaska Radio and Service Co., Inc., 2 FCC 502, 504 (1936); *In re* Application of S. George Webb, 1 FCC 267, 268 (1935); In the Matter of Wichita Falls Broadcasting Co., 3 FCC 386, 397 (1936).

[7]In the Matter of Regan and Bostwick, 3 FCC 269, 273 (1936); In the Matter of Utah Radio Educational Society, *et al.*, 3 FCC 246, 254 (1936).

A large number of the contributing considerations with regard to which the FRC and FCC have built up policies by the case to case method relate to the qualifications and conduct of applicants. The Commissions have held that it is desirable that the applicant be of good moral character; that he or his staff be technically qualified to operate a station and be conversant with the laws, rules, and problems affecting broadcasters; that he have had executive business experience; that the stockholders of applicant corporations reflect diversity in their backgrounds and interests; and that the applicant participate actively in the station's operation, be a resident of the community in which the station is located, and be conversant with community needs. With respect to each of these considerations there have, of course, been grants to applicants who lacked the desired qualification but possessed others. Very frequently the contributing factor which has outweighed those just cited has been financial ability. Great stress has been placed on the importance of the applicant having available sufficient capital to finance the "construction and reasonably extended initial operation of the station." The FCC views with disfavor reliance for financial backing upon another party or upon a contingency, although a court reversed one decision in which it denied an application solely upon these grounds[8].

After a license has been granted the FCC has frequently discovered misrepresentations in license applications or in reports submitted to it. Its former policy in such cases was to censure the offending station severely, ascertain that the persons responsible for the fraud were no longer associated with the station, and then renew the license. More recently the Commission has been disposed to revoke or refuse to renew licenses where serious fraud is discovered. It eliminated one station on this ground in 1940 and has deleted two others since the end of the war.

[8]*Heitmeyer v. Federal Communications Commission*, 95 F(2d) 91, 100 (1937).

Most controversial of the administrative policies affecting the standard broadcast service are those that have sought to assure that programs do not too flagrantly violate the statutory standard of public interest, convenience, or necessity. Both the Radio Commission and the FCC have held consistently that they may and must consider program content as one element in judging whether a grant or renewal will serve the public interest and that such consideration does not constitute censorship, which is expressly forbidden by the act. In this view they have been upheld by the courts.

The general requirement regarding program content is, according to repeated FRC and FCC statements in opinions, press releases, and reports, that "the tastes, needs, and desires of all substantial groups among the listening public should be met, in some fair proportion, by a well-rounded program . . ."[9] In a special report in 1946 on *Public Service Responsibility of Broadcast Licensees* the importance of a balanced program schedule was reiterated. The Commission declared that in considering future license renewal applications it would give consideration to four program service factors: sustaining programs, local live programs, discussions of public issues, and the elimination of advertising excesses. The first three should be included in the program schedule in a fair proportion. Despite repeated declarations regarding the importance of a balanced program schedule the FCC has not used its power to enforce its policy. Not a single station has been denied a license renewal on this ground although by the Commission's own statement many stations have been serious offenders.

The licensing authority has had more success, however, in ridding the air of particular programs it considered offensive or contrary to the public interest. The Radio

[9]In the Matter of Applications of Great Lakes Broadcasting Co., *et al.*, in Federal Radio Commission, *Third Annual Report* (1929), p. 34.

Commission deleted a number of stations on this ground among others. While the FCC refused to renew one license because of misleading advertising, it has usually confined itself to censure. Most programs held contrary to the public interest have been medical broadcasts or the advertising of alleged cures for physical ailments and suffering. Chairman Frank R. McNinch employed letters and conferences during his tenure of office in 1937-38 to seek to infleunce stations to avoid broadcasts he deemed obscene or unduly alarming[10].

Prior to 1927 the broadcasters, the listeners, and the Secretary of Commerce, who was then the licensing authority, were largely agreed that the medium of radio ought not to be employed for advertising. The Federal Radio Commission accepted advertising as a means of making broadcasts lucrative and thus making more programs available to the public, but it deplored advertising excesses and refused to renew some licenses, *inter alia,* because the stations in question had carried an offensive number or kind of commercial announcements. In its 1946 report on *Public Service Responsibility of Broadcast Licensees* the FCC listed as examples of undesirable advertising practices the insertion of political propaganda into commercial announcements, the use of lengthy commercial announcements, the interruption of programs, particularly news broadcasts, for advertising, and the intermixture of programs and advertising without observing a clear distinction between the two.

With respect to the discussion of public issues the FCC's policy rests upon these basic principles: (1) a station may not shirk its duty to devote a reasonable amount of time to the discussion of questions of public interest, nor may it refuse to sell time for this purpose[11]; (2) each station must insure that a well-rounded discussion is offered, making

[10]Federal Communications Commission, Press Releases (December 18, 1937, and October 31, 1938).

[11]*In re* United Broadcasting Co., 10 FCC 515, 517-518 (1945); *In re* Petition of Robert Harold Scott (July 19, 1946), unpublished.

time available for the presentation of all points of view without discrimination[12]; (3) the licensee may not himself editorialize[13]; (4) no station will be licensed to any special interest or group which proposes to use it solely in its own interests[14].

The Radio Commission and the FCC have accorded considerable weight to evidence that an applicant proposes to present, or has in the past presented, a program service that is new or distinctive.

Retroactive consent to transfers in the control of stations has usually been granted even when permission for the assignment of the license was not secured in advance as required by law. Several stations have been denied license renewals, however, because among other offenses they relinquished partial control over program content to another party; in other cases similar action by licensees has resulted only in censure.

With respect to the prices paid for broadcast stations the consistent policy of the Radio and Communications Commissions has been to pay no attention to the question whether there was a consideration for the license or the frequency unless the contract on its face indicated that a sizeable consideration for the license was involved. In most cases the FCC has considered only whether there was evidence of a trafficking in stations and whether the price paid was such that it would adversely affect the licensee's financial qualifications or result in overcommercialization to the detriment of programming in the public interest[15]. There has

[12]In the Matter of Applications of Great Lakes Broadcasting Co., *et al.*, in Federal Radio Commission, *Third Annual Report* (1929), pp. 32-33.

[13]In the Matter of Mayflower Broadcasting Corp., *et al.*, 8 FCC 333, 339-341 (1941). This principle is scheduled for reexamination at public hearings early in 1948.

[14]In the Matter of Applications of Great Lakes Broadcasting Co., *et al.*, *op. cit.* pp. 35-36.

[15]In the Matter of Powel Crosley, Jr., Docket 6767 (1945).

been considerable dispute among the commissioners regarding the merits of this policy and its application to concrete cases. In a number of recent opinions the majority has argued that there was no clear evidence of the sale of a license or of intended overcommercialization despite the payment of prices far exceeding the value of the physical assets of the station; it accordingly contended that the Commission should follow its own precedents on this issue until Congress directs that a different policy be adopted. The dissenting commissioners have urged the importance of flexibility in the formulation of administrative policy and have declared that, "No licensee or prospective licensee has any vested interest in the Commission's past mistakes or omissions . . ."[16]

The FCC has consistently taken the position that "where the economic situation of a community permits, the public interest is best served by competing broadcast facilities[17]." Although early decisions sometimes denied authorizations for new stations on the ground that the economic situation did not permit additional competition, the Commission has held since 1941 that it will weigh the effect of competition on an applicant's financial qualifications, but established licensees must take their chances in the open market[18]. Since the end of the war the FCC has been particularly liberal in authorizing new stations without regard to economic injury.

Beginning in the late 1930's FCC opinions began to reflect concern regarding the multiple ownership of stations in the same area by one licensee, and this became a contributing factor in the consideration of applications. In 1943 the Commission incorporated a ban on such multiple ownership into the formal rules, but an escape clause was added providing that the rule might be waived if it should be determined

[16] *Ibid.*

[17] In the Matter of Arthur Lucas, 5 FCC 464, 466 (1938).

[18] In the Matter of Presque Isle Broadcasting Co., 8 FCC 3, 9-10 (1940). The Supreme Court suggested that the FCC adopt this policy in its dictum in the case of *Federal Communications Commission v. Sanders Brothers Radio Station,* 309 U. S. 470, 473-475 (1940).

that waiver would serve the public interest, convenience, or necessity. This is an exception to the general practice of the Commission not to adopt a rule unless it is controlling in all cases.

The general practice is illustrated by the newspaper ownership policy, which holds that, *ceteris paribus*, applicants who do not own newspapers should be favored over those who do in order to promote diversification in the media of public information. This policy was first urged upon the FCC in 1935 by a dissenting commissioner, and was applied by the majority in a 1938 case. In a considerable number of recent cases the fact of newspaper ownership has weighed rather heavily against an applicant, but the policy has not been applied zealously where counteracting considerations were present.

Another attempt to combat monopoly in the broadcasting industry appeared in a series of rules adopted by the Commission in 1941 which were designed to make the formation of competing networks easier, assure to stations affiliated with networks control over their own programming and advertising rates, render network programs more freely available to unaffiliated stations, and curb the multiple ownership of stations and of chains by the network organizations[19].

In the last two decades a number of new types of broadcast servcies, called "nonstandard broadcast", have developed. FM broadcasting, based on a different principle from standard broadcasting, is superior in that it makes possible high fidelity reproduction, eliminates most electrical interference, and permits more stations to be licensed; signals carry only as far as the horizon, however. In planning an equitable distribution of FM facilities, the FCC accordingly determined that the service area of each station "should be commensurate with the common cultural, economic, social, or other char-

[19]Federal Communications Commission, rules 3.101-3.107.

acteristics which would justify service to the area as a unit[20]." A nation-wide allocation plan based upon this principle has been devised.

In passing upon applications for FM station licenses the Commission is applying the same tests it has formulated for standard stations with respect to such matters as the character of applicants, financial and technical qualifications, local residence, participation of the licensee in the station's operations, the use of efficient technical equipment, newspaper ownership, and network affiliation contracts. The FM multiple ownership rule is somewhat more stringent than the standard broadcast rule, although it too has been waived on occasion. Despite the early hopes that FM would introduce healthy competition into the broadcast industry, it has served to strengthen rather than combat monopoly, most FM grants having been awarded to standard licensees or to newspaper owners.

In 1940 the FCC sought to encourage the development of distinctive FM program service by requiring all FM stations to devote some time each day to programs "utilizing the full fidelity capability of the system" and not duplicated simultaneously on any standard or FM station in the area. In 1945 this requirement was dropped from the rules at the insistence of the broadcasters, who argued that it would impose an intolerable economic burden on FM licensees. In some individual cases, however, the factor of distinctive and meritorious programming has received attention.

In 1938 the Commission made provision for a class of broadcast stations called "noncommercial educational", to be licensed only to organized nonprofit educational agencies for use in advancing the agency's educational program. Since 1940 these stations have been required to employ FM emissions. Commercial broadcasts are not permitted.

[20]Federal Communications Commission, *Seventh Annual Report* (1941), pp. 30-31; rule 3.204.

Television stations were first licensed experimentally by the Federal Radio Commission in the late 1920's. Because very wide frequency channels are necessary for television, the Radio Commission announced in 1930 that it would give priority to experimenters who employed the narrowest channels and produced the clearest pictures. The television receiver must be so designed as to accord closely with the design of the transmitter, so common standards for all receiver and transmitter manufacturers are essential. Agreement on common standards among manufacturers and experimenters could not be reached for many years, and the FCC several times refused to adopt standards or to permit television on a commercial basis on the ground that such action would "freeze" television at the existing stage of technological development. Standards were finally adopted in 1941 after a large measure of agreement had been reached within the industry, and commercial operation was then allowed. Because these standards provide only for monochrome (black and white) pictures, the Commission is presently being urged by some interests to revise them in favor of color television, but it has thus far refused to do so on the ground that color television is not sufficiently well developed and that adoption of standards based upon existing methods would not permit "incorporation of better performance characteristics without requiring a change in fundamental standards[21]."

With respect to other licensing considerations, including multiple ownership and network affiliation contracts, the policies pursued with regard to television largely parallel the FM policies. In order to make the production of television programs less expensive and thus encourage the growth of the service, the FCC recently suggested that it would permit television stations to draw all their programs from network

[21]In the Matter of Columbia Broadcasting System, Inc., Docket 7896 (March 18, 1947).

sources until greater economic support becomes available[22].

Facsimile stations, which transmit images of still objects for record reception, have not yet graduated from the experimental stage although the Radio Commission first licensed experimental facsimile stations in the late 1920's. The principal difficulties have been the failure of interested parties to agree on standards of design and the FCC's policy for many years of permitting FM facsimile only when multiplexed with FM aural broadcasts. It now permits independent facsimile transmissions, and early graduation of the service to a commercial status is expected.

International broadcast stations achieved commercial status in 1939. The rules fix a minimum power in order to assure that international broadcasts will reach the distant portions of the world for which they are intended and will compete successfully with international broadcasts by foreign nations. Programs are required to reflect the culture of this country and promote international good will[23]. During and since the war all international broadcast stations have been operated by the Department of State.

The Licensing of Common Carrier Services

Because of the scarcity of frequencies and the Radio Commission's interpretation of the standard of public interest, fixed stations, designed to transmit from point to point, were required to assume the obligation of carrying public correspondence without discrimination. A number of applications have been denied because the licensing authority found that the station proposed to render a private rather than a public service. Even when it was clear that few, if any, public messages would be carried, however, fixed stations have occasionally been licensed at points where radio

[22]"Chairman Denny's Luncheon Speech," *Broadcasting* (September 22, 1947), p. 94.

[23]This rule has been suspended since 1939.

constituted the only feasible means of communication or where it would not be profitable for the regular radio common carriers to undertake the operation.

In authorizing new points of communication for international common carriers the regulatory authority has had to consider a variety of factors. For many years it took the position that if prospective traffic and revenue were large enough to support the entry of a new carrier, competition should be encouraged. It also permitted the construction of cable and radio circuits to serve the same foreign points in order to gain the advantages provided by both media and build a communications system less subject to disruption. Against the advantages of competition, however, the regulatory authority weighed the desirability of conserving frequencies, the danger that foreign administrations would play rival American carriers against each other, the growing need for a rationally planned system of communications to serve peacetime and wartime needs, and, since 1936, the doctrine that where adequate service to a particular point obtains, further circuits should not be authorized. The advantages of competition proving increasingly ephemeral with changes in the international political scene, the FCC eventually espoused a merger of all carriers, overruling its earlier view that competition should be encouraged.

Radiotelegraph and radiotelephone circuits have been licensed within the United States to provide a general public service to limited areas not served by other means of communication and to offer what is in effect a private service in areas where it would not be practicable or profitable for the regular communications common carriers to operate. In addition, international carriers and public press stations have been licensed to handle public correspondence between major cities in the United States despite the existence of parallel wire facilities. Such licensing is difficult to justify so long as there is a dearth of frequencies, and in recent years the Commission has usually refused to authorize these circuits,

although the opening of new frequency bands may revive the practice.

With regard to international public press service the Radio and Communications Commissions have refused since 1929 to license stations to individual newspapers and press associations and have required that a single company handle the traffic on a cooperative basis in order to make possible optimum, planned use of frequencies. Other international carriers may, however, also carry press traffic.

Public coastal stations are regularly licensed to handle public correspondence between the shore and mobile marine units in harbors and on the high seas. In considering applications for coastal harbor stations paramount stress is placed upon the need for service, the availability of frequencies, and the likelihood that the station will secure enough business to cover its costs. The determination of need rests upon findings as to the nature of river, harbor, or lake traffic, the number of passengers carried, types of messages that would be transmitted, safety considerations, proposed charges, existing service, and connections that would be established with landline carriers.

The Licensing of the Safety and Special Services

Stations in the safety and special services are licensed to industries or organizations which need them to promote safety of life or property or to aid in their regular commercial or private operations. The marine radio service is provided for in considerable detail in the Communications Act, which incorporates pertinnent provisions of the International Convention for the Safety of Life at Sea. Certain ships are required to carry radio installations, but some of these may be exempted from the requirement by the FCC. In granting exemptions the Commission has relied principally on evidence regarding the perils of the ship's route and the effect an exemption would have on the safety of shipping generally.

The law specifies the radio equipment which ships subject to the compulsory requirements of the act must carry and requires that the FCC grant type approval of equipment before particular models may be employed. The Commission has promulgated rules fixing the order of priority of radio messages in the marine services and prescribing procedures for the handling of distress calls. Since 1941 it has required ship stations to transmit personal or business messages for any person on board. The rules that govern the operation of ship stations with a view to protecting the safety of life and property apply for the most part to coastal stations as well.

Many types of radio stations are licensed to meet the needs of the aviation industry. Since 1929 the licensing authority has required that in the case of stations furnishing radio service to aircraft flying regular routes the owners of the airlines cooperate in the operation and maintenance of the aeronautical ground stations. In 1930 virtually all the air transport companies operating radio-equipped aircraft accordingly formed a cooperative communications company called Aeronautical Radio, Incorporated, which became and remains the licensee of substantially all aeronautical ground stations. These stations must serve unscheduled itinerant aircraft in emergencies, and also at other times if prior arrangements have been made for sharing the costs of operation. In addition to the service they offer to mobile aircraft, aeronautical ground stations may carry on a point to point service among themselves, transmitting messages dealing with aviation needs as well as public correspondence between aircraft passengers and persons on the ground. Other types of stations licensed to aid in aircraft operations are airdrome control stations, navigation and landing aids, flying school stations, flight test stations, and mobile utility stations.

The Radio Commission did not promulgate rules governing police radio stations until 1930, although police systems

had been licensed in several cities prior to that time. Police radio stations are restricted to the transmission of emergency communications between central police headquarters and squad cars or other mobile units. Cities in the same general area must cooperate in the use of frequencies and are encouraged to share radio facilities to conserve frequencies and to make possible more efficient law enforcement. At the recommendation of the Associated Police Communications Officers the FCC in 1936 provided for an intercity radiotelegraph network to facilitate the rapid exchange of emergency messages among law enforcement agencies.

In 1931 the Federal Radio Commission established a marine fire service to provide emergency communication between municipal fire department headquarters and fire boats, but for many years fire departments had to rely upon the local police radio system or wire facilities for other communications. In 1944 the FCC announced that cities whose fire departments serve a population of 150,000 or more would henceforth be eligible to operate a separate fire radio service.

"Special emergency" stations, for which the Radio Commision first made provision in 1930, are licensed to power companies, governmental departments of public works, telephone and telegraph companies, and relief agencies "for the purpose of handling dispatches of an emergency nature during times when such traffic cannot be otherwise delivered because of the breakdown of established means of communication[24]."

Forestry stations were licensed as special emergency stations until 1939, but in that year they were established as an independent emergency service. Only municipal, state, and private organizations "legally responsible for the protection of forest areas" are eligible for grants, and stations in any single geographical area must coordinate their operations.

With the growth in the number of frequencies made available by research the FCC has increasingly accepted the

[24]Federal Radio Commission, General Order No. 86 (April 8, 1930).

doctrine that it is in the public interest to license radio stations to serve the private interests of business concerns and individuals. Among the older kinds of special radio service that have been authorized are geological stations, used by oil companies to aid in the location of oil deposits, and motion picture stations, to communicate with film production units in isolated areas and to coordinate the activities of various groups during the filming of pictures. Both types of service were established in the early 1930's. In 1939 a relay press service was inaugurated to permit the transmission of news from isolated areas, and the FCC has recently indicated that it will soon license mobile stations to newspapers for use in urban areas as well[25].

Since the end of the war several new types of radio service have been established. The earliest of these was the railroad radio service, which makes radio available to facilitate the switching operations that take place in railroad classification yards and also to promote safety on the railroads.

In August, 1946, a "utility radio service" was inaugurated. Stations are licensed to power utilities, transit utilities, and petroleum pipeline companies for communications essential to the operation and maintenance of their production, transmission, and distribution facilities.

In order to eliminate interference to radio reception arising from medical diathermy machines, industrial heating equipment, and other devices which generate radio waves for purposes other than communication the Commission in June, 1947, placed in effect rules for an "industrial, scientific, and medical service". The rules provide that these devices need not be licensed if they operate on one of four specified frequency channels or are so shielded that no interference to other services results. Provision is made for type approval of equipment by the Commission. Devices operating on other

[25]12 *Federal Register* 1063-1064 (February 14, 1947).

frequency channels and not shielded must be licensed.

A number of radio services established on an experimental basis in 1945 may soon graduate to a regular status. The general mobile service makes radio available for communication with automobiles, trucks, and busses both in urban areas and on the highways. The Commission has determined that these stations may be licensed either to existing communications common carriers or directly to companies wishing to employ them in their business operations. The citizens radio service will provide a private medium for personal and business communications. No restrictions on the use to which the service may be put are contemplated except that licensees will not be permitted to charge for transmissions or to broadcast.

The Licensing of Commercial and Amateur Operators

In the licensing of commercial operators the trend has been toward increased specialization in examination requirements and in operator classifications in order to match the different specialized skills demanded of operators and technicians in the various radio services. As a corollary of this policy the FCC has eliminated the licensing requirement entirely in the case of operators who need no technical knowledge or skill to perform their functions.

On the theory that amateurs serve the public interest by contributing to the advancement of the science of radio, by lending aid in emergencies, and by training themselves for invaluable military service in time of war the Radio Commission and the FCC have consistently applied a liberal policy in their licensing and have encouraged them to operate their stations and to carry on research as nearly as possible under all the diverse conditions experienced in other radio services.

Conclusions

The Federal Radio Commission and Federal Communica-

tions Commission have been able to maintain a surveillance over the growth and operations of the radio industry, and commissioners have been able to reach a surprising degree of agreement as to the broad policies that will serve the public interest. In a number of their policies the FRC and FCC have reflected an apparent intent to promote the public interest affirmatively rather than to serve only as impartial arbiters between competing applicants or services.

Probably the most striking and fundamental deficiency revealed by this record is a divergence between announced policy and its application with respect to some of the more controversial issues in the regulation of broadcasting. The broadcasters have been able with few exceptions, for example, to present program schedules which appeal primarily to one stratum of taste despite repeated declarations by the regulatory authority that they have an obligation to present well-rounded schedules, with programs that appeal to all tastes and cultural strata. Such departures from declared policy have probably occurred because the licensing agency is brought into contact very frequently with the industry it regulates but very little with representatives of the listening public whose interests it has declared to be synonymous with the public interest in the broadcasting field. Under these circumstances the listener is likely to seem as abstract as the principles which announce his rights. To provide an institutional means of keeping the FCC continuously aware of, and encouraged by, the importance and strength of the listening public it might be wise to establish an advisory committee representative of consumer groups, parent-teacher associations, political parties, musical organizations, professional groups, etcetera. The operation of more stations by state and local governments would also help because it would leaven the character of the influence brought to bear upon the Commission by the broadcast licensees and would offer a means of balancing the deficiencies of commercial programming .

Under the Communications Act the President, not the

FCC, assigns frequencies for the use of federal government agencies. The President is advised in this duty by an "Interdepartment Radio Advisory Committee", and the only provision for resolving possible conflicts in assignments by the FCC and the President is the representation of the Commission on the interdepartment committee. Conflicts have frequently taken place within the IRAC between the FCC and federal agencies which operate radio stations, especially the military services. It seems elementary that the ideal allocator of the entire spectrum would be a single agency, such as the FCC, which does not itself operate radio stations and which therefore has no motive for seeking to gain a disproportionate share of the spectrum for its own use to the possible disadvantage of the larger national interest.

In assessing policies in this field it must be borne in mind that communication is never an end in itself, but is used invariably to aid in the furtherance of some purpose whose relative public importance the regulatory authority must determine. The spectrum of purposes, ranging from entertainment to industrial heating, is as broad and uncertain in extent as is the radio spectrum itself. In the last analysis a wise and careful choice of commissioners who display public spirit of a high order, an open mind, and mature intellectual curiosity regarding a great many phases of contemporary culture is likely to do most to improve public policy in the field. The need for the administrative generalist is evident.

VITA

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